

## IN THE CLAIMS

Please cancel claims 10, 14, 34, and 38.

For the Examiner's convenience, a list of all claims is included below.

What is claimed is:

1. (Currently Amended) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
  - receiving the single instruction;
  - receiving a first vector having a first plurality of numbers and a second vector having a second plurality of numbers, each of the first plurality of numbers pointing to one of a plurality of entries, each of the plurality of entries being in one of a plurality of look-up tables; and
  - replacing simultaneously the plurality of entries in the plurality of look-up tables that are indicated by the first plurality of numbers, with the second plurality of numbers;
  - wherein the receiving and the replacing operations are performed in response to the microprocessor receiving the single instruction;
  - wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.
2. (Previously Presented) A method as in claim 1 wherein the first vector having the first plurality of numbers is received from a first entry in a register file; and the second vector having the second plurality of numbers is received from a second entry in the register file.
3. (Original) A method as in claim 2 wherein the single instruction specifies indices of the first and second entries in the register file.

4. (Currently Amended) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
  - receiving the single instruction having an identity number code that specifies a DMA controller and an index of a first entry in a register file that contains control parameters, wherein the control parameters include a bit segment which specifies a count indicating a number of entries to be loaded in each of a plurality of look-up units;
  - receiving the control parameters from the register file; and
  - replacing at least one entry in at least one of the plurality of look-up units in a microprocessor unit according to the control parameters with at least one number using the Direct Memory Access (DMA) controller;
  - wherein the replacing is performed in response to the microprocessor receiving the single instruction.
  
5. (Currently Amended) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:
  - receiving the single instruction having an identity number code that specifies a DMA controller and an index of a first entry in a register file that contains control parameters, wherein the control parameters include a bit segment which specifies a count indicating a number of entries to be loaded in each of a plurality of look-up units; and
  - receiving the control parameters from the register file;
  - replacing at least one entry for each of a plurality of look-up units in a microprocessor according to the control parameters, with a plurality of numbers using [[a]] the Direct Memory Access (DMA) controller;

wherein the replacing is performed in response to the microprocessor receiving the single instruction.

6. (Original) A method as in claim 5 wherein a single index encoded in the instruction specifies a location of the at least one entry in the plurality of look-up units.
7. (Original) A method as in claim 5 wherein a single index encoded in the instruction specifies a total number of the at least one entry for each of a plurality of look-up units.
8. (Previously Presented) A method as in claim 5 wherein a source address of the plurality of numbers in host memory is specified in an entry of a register file.
9. (Original) A method as in claim 8 wherein the single instruction specifies an index of the entry in the register file.
10. (Canceled)
11. (Currently Amended) A method for execution by a microprocessor in response to receiving a single instruction, the method comprising:  
receiving the single instruction;  
receiving a first vector having a plurality of numbers;  
partitioning a look-up memory into a plurality of look-up tables, wherein the look-up memory comprises a plurality of look-up units, and wherein the partitioning of the look-up memory comprises configuring the plurality of look-up units into the plurality of look-up tables according a configuration indicator specified by the single instruction;

looking up simultaneously a plurality of elements of a second vector from the plurality of look-up tables, each of the plurality of elements being in one of the plurality of look-up tables and being pointed to by one of the plurality of numbers;

wherein the partitioning and the looking-up operations are performed in response to the microprocessor receiving the single instruction wherein the look-up memory comprises a plurality of look-up units, and wherein said partitioning look-up memory comprises: configuring the plurality of look-up units into the plurality of look-up tables.

12. (Previously Presented) A method as in claim 11 wherein the receiving the first vector having a plurality of numbers comprises:  
partitioning a string of bits into a plurality of segments to generate the plurality of numbers.
13. (Original) A method as in claim 12 wherein the single instruction specifies format information in which the plurality of numbers are stored in the string of bits.
14. (Canceled) .
15. (Previously Presented) A method as in claim 12 wherein the string of bits is received from an entry of a register file.
16. (Original) A method as in claim 15 wherein the single instruction specifies an index of the entry.
17. (Previously Presented) A method as in claim 11 further comprising:

storing the second vector having the plurality of elements in an entry of a register file.

18. (Original) A method as in claim 17 wherein the single instruction specifies an index of the entry.
19. (Original) A method as in claim 17 wherein the single instruction specifies format information in which the plurality of elements are stored in the entry.
20. (Previously Presented) A method as in claim 11, wherein the look-up memory comprises a plurality of look-up units, and wherein said partitioning look-up memory comprises: configuring the plurality of look-up units into the plurality of look-up tables; wherein each of the plurality of look-up units comprises 256 8-bit entries.
21. (Original) A method as in claim 11 wherein the single instruction specifies a total number of entries contained in each of the plurality of look-up tables.
22. (Original) A method as in claim 21 wherein the total number of entries is one of:
  - a) 256;
  - b) 512; and
  - c) 1024.
23. (Original) A method as in claim 11 wherein the single instruction specifies a total number of bits used by each entry contained in the plurality of look-up tables.
24. (Original) A method as in claim 21 wherein the total number of bits is one of:

- a) 8;
  - b) 16; and
  - c) 24.
25. (Currently Amended) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:
- receiving a single instruction;
  - receiving a first vector having a first plurality of numbers and a second vector having a second plurality of numbers, each of the first plurality of numbers pointing to one of a plurality of entries, each of the plurality of entries being in one of a plurality of look-up tables; and
  - replacing simultaneously the plurality of entries in the plurality of look-up tables that are indicated by the first plurality of numbers with the second plurality of numbers;
- wherein the receiving and the replacing operations are performed in response to the microprocessor receiving the single instruction;
- wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.
26. (Original) A media as in claim 25 wherein the first plurality of numbers are received from a first entry in a register file; and the second plurality of numbers are received from a second entry in the register file.
27. (Original) A media as in claim 26 wherein the single instruction specifies indices of the first and second entries in the register file.

28. (Currently Amended) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:

receiving the single instruction having an identity number code that specifies a DMA controller and an index of a first entry in a register file that contains control parameters, wherein the control parameters include a bit segment which specifies a count indicating a number of entries to be loaded in each of a plurality of look-up units;

receiving the control parameters from the register file; and

replacing at least one entry in at least one of a plurality of look-up units in a microprocessor unit according to the control parameters with at least one number using a Direct Memory Access (DMA) controller;

wherein the [[the]] replacing is performed in response to the microprocessor receiving the single instruction.

29. (Currently Amended) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:

receiving the single instruction having an identity number code that specifies a DMA controller and an index of a first entry in a register file that contains control parameters, wherein the control parameters include a bit segment which specifies a count indicating a number of entries to be loaded in each of a plurality of look-up units;

receiving the control parameters from the register file;

and

replacing at least one entry for each of a plurality of look-up units in a microprocessor  
according to the control parameters, with a plurality of numbers using a Direct  
Memory Access (DMA) controller;

wherein the receiving is performed in response to the microprocessor receiving the single  
instruction.

30. (Original) A media as in claim 29 wherein a single index encoded in the instruction specifies a location of the at least one entry in the plurality of look-up units.
31. (Original) A media as in claim 29 wherein a single index encoded in the instruction specifies a total number of the at least one entry for each of a plurality of look-up units.
32. (Original) A media as in claim 29 wherein a source address of the plurality of numbers is specified in an entry of a register file.
33. (Original) A media as in claim 32 wherein the single instruction specifies an index of the entry in the register file.
34. (Canceled)
35. (Currently Amended) A machine readable media containing an executable computer program instruction which when executed by a digital processing system causes said system to perform a method comprising:  
receiving a single instruction;  
receiving a first vector having a plurality of numbers;



partitioning a look-up memory into a plurality of look-up tables, wherein the look-up memory comprises a plurality of look-up units, and wherein the partitioning of the look-up memory comprises configuring the plurality of look-up units into the plurality of look-up tables according a configuration indicator specified by the single instruction ;

looking up simultaneously a plurality of elements of a second vector from the plurality of look-up tables, each of the plurality of elements being in one of the plurality of look-up tables and being pointed to by one of the plurality of numbers;  
wherein the partitioning and the looking-up operations are performed in response to the microprocessor receiving the single instruction.

36. (Previously Presented) A media as in claim 35 wherein said receiving the first vector having a plurality of numbers comprises:  
partitioning a string of bits into a plurality of segments to generate the plurality of numbers.

37. (Original) A media as in claim 36 wherein the single instruction specifies format information in which the plurality of numbers are stored in the string of bits.

38. (Canceled).

39. (Previously Presented) A media as in claim 36 wherein the string of bits is received from an entry of a register file.

40. (Original) A media as in claim 39 wherein the single instruction specifies an index of the entry.
41. (Previously Presented) A media as in claim 35 wherein the method further comprises:  
storing the second vector having the plurality of elements in an entry of a register file.
42. (Original) A media as in claim 41 wherein the single instruction specifies an index of the entry.
43. (Original) A media as in claim 41 wherein the single instruction specifies format information in which the plurality of elements are stored in the entry.
44. (Original) A media as in claim 38 wherein each of the plurality of look-up units comprises 256 8-bit entries.
45. (Original) A media as in claim 35 wherein the single instruction specifies a total number of entries contained in each of the plurality of look-up tables.
46. (Original) A media as in claim 45 wherein the total number of entries is one of:
  - a) 256;
  - b) 512; and
  - c) 1024.
47. (Original) A media as in claim 35 wherein the single instruction specifies a total number of bits used by each entry contained in the plurality of look-up tables.

48. (Original) A media as in claim 47 wherein the total number of bits is one of:
- a) 8;
  - b) 16; and
  - c) 24.
49. (Previously Presented) A method as in claim 5 wherein the at least one entry for each of the plurality of look-up units comprises a plurality of entries for each of the plurality of look-up units.
50. (Previously Presented) A method as in claim 11 wherein the microprocessor comprises a media processor integrated with a memory controller for host memory on a single integrated circuit.